

Title (en)

A METHOD FOR THE COMPARISON OF PROTEIN HIGHER ORDER STRUCTURES

Title (de)

VERFAHREN ZUM VERGLEICH VON PROTEINSTRUKTUREN HÖHERER ORDNUNG

Title (fr)

PROCÉDÉ DE COMPARAISON DE STRUCTURES PROTÉIQUES D'ORDRE SUPÉRIEUR

Publication

EP 3146345 A4 20171129 (EN)

Application

EP 15795963 A 20150521

Priority

- US 201462001303 P 20140521
- US 2015032081 W 20150521

Abstract (en)

[origin: WO2015179714A1] Some aspects of the disclosure include methods for comparing the higher order structures (HOS) of proteins using covalent labeling agents which allow for the direct comparison of changes in the HOS of protein therapeutics using mass spectrometry. The inventive methods can be used to access the effect of changing the process of producing and/or storing complex biologic compounds as well as determining if the HOS of a protein therapeutic has spontaneously changed during storage. Still other uses include comparing branded biologic therapeutic compounds to biosimilar compounds, and measuring changes in the aggregation states of proteins.

IPC 8 full level

G01N 33/68 (2006.01); **C07K 1/13** (2006.01)

CPC (source: EP US)

C07K 1/13 (2013.01 - EP US); **G01N 33/6848** (2013.01 - EP US); **G01N 2560/00** (2013.01 - US)

Citation (search report)

- [XY] YUPING ZHOU ET AL: "Diethylpyrocarbonate Labeling for the Structural Analysis of Proteins: Label Scrambling in Solution and How to Avoid It", JOURNAL OF THE AMERICAN SOCIETY FOR MASS SPECTROMETRY., vol. 23, no. 5, 14 February 2012 (2012-02-14), US, pages 899 - 907, XP055417703, ISSN: 1044-0305, DOI: 10.1007/s13361-012-0349-3
- [XY] YUPING ZHOU ET AL: "Increased Protein Structural Resolution from Diethylpyrocarbonate-based Covalent Labeling and Mass Spectrometric Detection", JOURNAL OF THE AMERICAN SOCIETY FOR MASS SPECTROMETRY., vol. 23, no. 4, 2 February 2012 (2012-02-02), US, pages 708 - 717, XP055417704, ISSN: 1044-0305, DOI: 10.1007/s13361-011-0332-4
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- [X] CAREY A. HOBBS ET AL: "Structural Characterization of the Conformational Change in Calbindin-D 28k upon Calcium Binding Using Differential Surface Modification Analyzed by Mass Spectrometry", BIOCHEMISTRY, vol. 48, no. 36, 15 September 2009 (2009-09-15), US, pages 8603 - 8614, XP055417822, ISSN: 0006-2960, DOI: 10.1021/bi900350q
- [X] YUPING ZHOU: "STRUCTURAL ANALYSIS OF PROTEINS BY COVALENT LABELING AND MASS SPECTROMETRIC DETECTION", DOCTORAL DISSERTATION, 1 February 2014 (2014-02-01), XP055237848, Retrieved from the Internet <URL:http://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1148&context=dissertations_2> [retrieved on 20151221]
- See references of WO 2015179714A1

Designated contracting state (EPC)

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DOCDB simple family (application)

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